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9 TEXAS INSTRUMENTS INCORPORATED  
10

11 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

12 IN THE MATTER OF:

13 CALIFORNIA REGIONAL WATER  
14 QUALITY BOARD, SAN FRANCISCO BAY  
15 REGION

16 REQUIREMENT FOR VAPOR INTRUSION  
17 EVALUATION WORKPLAN FOR OFFSITE  
18 OPERABLE UNIT IN SUNNYVALE,  
19 SANTA CLARA COUNTY,

20 **PETITION FOR REVIEW**

21 California Water Code § 13320;  
22 California Code of Regulations, title 23, § 2050

23 PETITION TO BE HELD IN ABEYANCE

24 **INTRODUCTION**

25 Texas Instruments Incorporated (“TI” or “Petitioner”) petitions the California State Water  
26 Resources Control Board (“State Water Board”) to review the May 13, 2014 letter issued to TI  
27 under Section 13267 of the California Water Code (“13267 Letter”) by the Regional Water Quality  
28 Control Board, San Francisco Bay Region (“Regional Water Board”) (**Exhibit A**). The 13267  
Letter requires a vapor intrusion evaluation work plan for Subunits 1, 2 and 3 of Operable Unit 1  
 (“the Site”) at the National Semiconductor and AMD Superfund sites in Santa Clara and Sunnyvale,  
 California. TI files this Petition under Section 13320 of the California Water Code and under the  
 State Water Board’s implementing regulations at Section 2050 of Title 23 of the California Code of  
 Regulations.

TI files this Petition to protect its right of appeal and requests that the State Water Board  
 hold this Petition in abeyance while negotiations with the Regional Water Board continue, under the  
 State Water Board’s implementing regulations at Section 2050.5(d).

1 **DISCUSSION**

2 TI provides the following information in support of its Petition as required by Section 2050  
3 of Title 23 of the California Code of Regulations.<sup>1</sup>

4 **1. Name and Address of Petitioner**

5 Petitioner is Texas Instruments Incorporated and the contact information is:

6 Hector Vargas  
7 EH&S Manager  
8 **Texas Instruments Incorporated**  
9 13350 TI Blvd. MS 329  
10 Dallas, TX 75243  
11 Phone: (972) 995-7370  
12 Email: h-vargas2@ti.com

13 *and*

14 Jonathan Weisberg  
15 Senior Counsel – EH&S and Real Estate  
16 **Texas Instruments Incorporated**  
17 13588 N. Central Exp., MS 3999  
18 Dallas, TX 75243  
19 Phone: (214) 479-1269  
20 Email: jweisberg@ti.com

21 Petitioner requests that copies of all communications relating to this Petition also be sent to  
22 its counsel of record:

23 Karen J. Nardi, Esq.  
24 **Arnold & Porter LLP**  
25 Three Embarcadero Center, 10<sup>th</sup> Floor  
26 San Francisco, CA 94111  
27 Phone: (415) 471-3301  
28 E-mail: karen.nardi@aporter.com

29 **2. Request for Review/Protective Filing**

30 The Regional Water Board action for which this Petition for Review is filed is the issuance  
31 of the 13267 Letter. Petitioner requests that the State Water Board review the 13267 Letter.  
32 Petitioner submits this petition for review as a protective filing while it works in good faith with the

33 \_\_\_\_\_  
34 <sup>1</sup> Items 1–9 that follow correspond to subsections 1–9 of 23 Cal. Code Reg. § 2050(a).

1 Regional Water Board Staff to resolve its concerns and requests that the State Water Board hold this  
2 Petition in abeyance in accordance with State Water Board practice.

3 **3. Date of Regional Water Board Action**

4 The Regional Water Board, through its Executive Officer, Bruce Wolfe, issued the 13267  
5 Letter on May 13, 2014. TI timely files this Petition within thirty (30) days of issuance of the  
6 13267 Letter.

7 **4. Statement of Reasons Why the Regional Water Board Action was Inappropriate**  
8 **and Improper**

9 The issuance of the 13267 Letter was inappropriate and improper as explained below.

10 **4.1 Overview: December 3, 2013 EPA Guidelines**

11 The Regional Water Board's requirement for a vapor intrusion evaluation workplan is based  
12 on guidelines issued by letter dated December 3, 2013 to the Regional Water Board by the U.S.  
13 Environmental Protection Agency, Region IX ("EPA") for vapor intrusion evaluations ("EPA  
14 Guidelines") (**Exhibit B**). The EPA Guidelines selectively apply to only nine Superfund sites in the  
15 south San Francisco Bay region (the "South Bay") and, among other things, "recommend": (i) new  
16 trichloroethylene ("TCE") interim short-term indoor air response action levels ("RALs"); (ii) new  
17 indoor air screening levels for TCE and tetrachloroethylene ("PCE"); and (iii) expansion of the  
18 offsite vapor intrusion study area based on estimated TCE shallow zone groundwater concentrations  
19 greater than 5 µg/L.

20 **4.2 Summary Statement of Reasons**

21 The Regional Water Board's directives in the 13267 Letter that TI comport with the EPA  
22 Guidelines are improper because: (i) there is inadequate scientific support for EPA's conclusions  
23 regarding the potential short-term risk posed by TCE; (ii) the 5 µg/L guideline for offsite vapor  
24 intrusion investigation is not consistent with geological conditions in the South Bay and is not  
25 appropriate for non-residential land uses; (iii) the EPA Guidelines attempt to impose cleanup  
26 standards upon Petitioner in a manner that is not consistent with procedures required under the  
27 Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C.  
28 § 9601 *et seq.*, and other federal laws; (iv) Water Code Section 13267 does not authorize the

1 Regional Water Board to impose remedial obligations, including those for vapor mitigation  
2 controls; (v) the EPA Guidelines are being selectively enforced, which is unfair; (vi) the EPA  
3 Guidelines are recommendations and do not impose legally binding requirements; and (vii) the EPA  
4 Guidelines are inappropriately prescriptive, in violation of the Water Code.

5 TI and its predecessor National Semiconductor Corporation (“National”) have worked  
6 cooperatively with the Regional Water Board, its staff, and other responsible parties for nearly three  
7 decades to investigate and remediate contamination at the Site. TI and National conducted soil  
8 vapor and indoor air sampling multiple times at the Site, in accordance with Regional Water Board  
9 requirements. The indoor air sampling conducted to date shows no exceedences related to vapor  
10 intrusion of applicable standards in occupied spaces under normal conditions of use, with the  
11 exception of recent pathway sample results in two bathrooms in Building 39 on TI’s campus, for  
12 which mitigation measures are being implemented. Despite TI’s longstanding work with the  
13 Regional Water Board on vapor intrusion, the Regional Water Board’s 13267 Letter now requires a  
14 different and far more expansive vapor intrusion evaluation work plan in conformance with the  
15 December 3, 2013 EPA Guidelines. TI objects to the Regional Water Board’s new requirements for  
16 a vapor intrusion evaluation work plan, and petitions the State Water Board for review of the 13267  
17 Letter, for reasons including but not limited to the following:

18 **4.2.1 EPA Has Not Provided Adequate Scientific Support for its New**  
19 **Short-Term RALs.**

20 EPA must provide adequate scientific support for its conclusions regarding the short-term  
21 risk posed by TCE, as set forth in the EPA Guidelines. EPA has not met this burden. In particular,  
22 the EPA Guidelines purport to rely on findings in the September 2011 *Toxicological Review of*  
23 *Trichloroethylene in Support of the Integrated Risk Information System* (“IRIS Assessment”) in  
24 support for the EPA Region IX short-term TCE RALs set forth in the EPA Guidelines. However,  
25 the IRIS Assessment did not develop a short-term inhalation exposure standard for TCE. Rather,  
26 the IRIS Assessment only derived a reference concentration (RfC) for TCE which assumes  
27 continuous exposure over a lifetime. EPA extrapolated that chronic exposure to a short-term  
28 exposure level not contemplated by the IRIS Assessment. This extrapolation was based primarily

1 on studies from a single lab whose results have never been replicated, and whose scientific  
2 methodology has been critiqued by reputable risk assessors. TI shares the concern raised by other  
3 parties that EPA's extrapolation of short-term TCE RALs from long-term exposure conclusions  
4 reached in the IRIS Assessment may be flawed and not based on sound science. Some of the  
5 scientific deficiencies in EPA's conclusions about the short-term risks of TCE based on the IRIS  
6 Assessment are detailed in a technical analysis and scientific literature review performed by  
7 Geosyntec Consultants (the "TCE White Paper"). A copy of the TCE White Paper and its  
8 transmittal to EPA headquarters is enclosed (**Exhibit C**).

9 In addition, the Halogenated Solvents Industry Alliance ("HSIA") has challenged the EPA's  
10 use of flawed studies as part of the IRIS Assessment in a petition entitled, "*November 5, 2013*  
11 *Request for Correction under the Information Quality Act*" (the "IQA Request") (**Exhibit D**).  
12 These studies also form the basis for the short-term TCE RALs set forth in the EPA Guidance. The  
13 IQA Request states that "EPA's exclusive reliance on a single inappropriate and unreproducible  
14 [TCE] study . . . constitutes erroneous information" and EPA's dissemination of this flawed study  
15 contravenes the Information Quality Act.

16 Moreover, because the TCE RALs are not regulatory standards, there has been neither  
17 notice-and-comment rulemaking nor any peer review or comment regarding EPA Region IX's  
18 conclusions about the short-term risks of TCE. In fact, the TCE RALs "recommended" in the EPA  
19 Guidance are orders of magnitude below other federal and state exposure standards for TCE that  
20 were developed through open, public processes. Specifically, the RALs cannot be reconciled with  
21 the federal and state OSHA worker safety standards which permit exposures (without respirators or  
22 other personal protective equipment) at levels that are tens of thousands of times higher than the  
23 EPA RALs. In practical effect, EPA is requiring that action be taken to limit exposures from vapor  
24 intrusion into a commercial building from TCE in a subsurface groundwater plume at levels as low  
25 as 7 or 9 µg/m<sup>3</sup> in indoor air, while employees in California can lawfully work around the same  
26 chemicals in the same workplace at levels of up to 135,000 µg/m<sup>3</sup> under Cal/OSHA standards. This  
27 inconsistency is irreconcilable for commercial properties, which comprise nearly the entire Site.  
28

1                                   **4.2.2    EPA Has Not Provided Adequate Technical Support for**  
2                                   **Expansion of Offsite Testing to Cover Buildings Overlying the 5**  
3                                   **µg/L TCE Plume.**

4                   The EPA Guidelines' expansion of the offsite indoor air testing area to all buildings  
5                   overlying the 5 µg/L TCE contour ("5 µg/L Guideline") is not technically supportable for the  
6                   following significant reasons:

7                   First, the 5 µg/L Guideline assumes buildings are occupied 24 hours a day, seven days a  
8                   week, as is typical for a residence. This assumption is not correct as it applies to TI since the Site is  
9                   comprised almost entirely of commercial buildings that are occupied for 8 to 10 hours a day,  
10                  typically five days a week.

11                  Second, the 5 µg/L Guideline has been calculated using geological data and assumptions  
12                  that do not reflect actual conditions in the South Bay. Significantly, the 5 µg/L Guideline was  
13                  derived using a default attenuation factor taken from a US EPA national database, which is a  
14                  compilation of sites throughout the country. The soil conditions at the Site (and throughout the  
15                  South Bay) differ significantly from the soil conditions at a majority of the sites in the EPA national  
16                  database. Differences in soil conditions are important because soil conditions are the primary  
17                  factors in deriving the rate of contaminant migration (attenuation factor) used to calculate the 5  
18                  µg/L Guideline. Empirical data at the Site and in the South Bay generally demonstrate that the  
19                  default attenuation factor used to calculate the 5 µg/L Guideline is overly conservative. In fact, the  
20                  default attenuation factor used to calculate the 5 µg/L Guideline is far more conservative than the  
21                  attenuation factors used by the Regional Water Board for the San Francisco Bay Area. If the  
22                  Regional Water Board had followed its own guidance, it would have calculated groundwater  
23                  screening levels for offsite vapor evaluation that are much greater than the 5 µg/L set forth in the  
24                  EPA Guidelines.

25                                   **4.2.3    Requirements of the EPA Guidelines Imposed by the Regional**  
26                                   **Water Board in the 13267 Letter Were Not Adopted In**  
27                                   **Accordance With CERCLA.**

28                  The federal Superfund law, set forth in 42 U.S.C. § 9601 *et seq.*, imposes mandatory  
procedures for adoption of regulations, for designation of applicable, relevant and appropriate  
requirements ("ARARs"), and for modification of remedies. The EPA Guidelines were not adopted

1 in accordance with these mandatory Superfund procedures. This is a significant deficiency because  
2 the Site is a federal Superfund site. In attempting to impose new regulatory obligations through the  
3 EPA Guidelines, EPA did not comply with the following mandatory federal procedures:

4 First, any amendment to a Record of Decision (“ROD”) requires formal notice and comment  
5 under 40 C.F.R. § 300.435(c)(2). The imposition of new remedial measures identified in the EPA  
6 Guidelines, including those for prompt and immediate mitigation of indoor air conditions, clearly  
7 constitutes a fundamental change in the remedies previously identified in the ROD for the Site, and  
8 thus would require a ROD amendment.

9 Second, the designation of an ARAR requires formal public notice and comment under 40  
10 C.F.R. § 300.435(c)(2)(ii). The EPA Guidelines adopted a new short-term TCE RAL and a new  
11 indoor air screening level for PCE without observing the required federal Superfund procedure to  
12 designate an ARAR.

13 Finally, legislative rulemakings must follow the formal rulemaking requirements and cannot  
14 be enforced in the absence of compliance with these procedures. If the Regional Water Board is  
15 permitted to enforce the recommendations set forth in the EPA Guidelines, the health-based RALs  
16 and investigative requirements in the EPA Guidelines should be considered *de facto* rulemaking.  
17 As such, they should be subject to public notice and comment procedures under the federal  
18 Administrative Procedures Act at 5 U.S.C. § 551(4). In addition, EPA should first submit a  
19 regulatory impact analysis and cost benefit analysis of the EPA Guidelines (including an assessment  
20 of reasonably feasible alternatives) to the Office of Management and Budget for review under  
21 Executive Order 12866 (Sept. 30, 1993).

22 **4.2.4 Requiring Compliance with the EPA Guidelines Would Impose**  
23 **Obligations on Petitioner Beyond the Scope of Water Code**  
24 **Section 13267.**

25 The Regional Water Board improperly used the 13267 process under the California Water  
26 Code. Water Code Section 13267 permits the Regional Water Board to require the submission of  
27 technical or monitoring reports in order to investigate water quality conditions. However, in  
28 requiring compliance with the EPA Guidelines, the 13267 Letter goes well beyond investigation

1 and purports to impose remedial obligations on Petitioner in the form of mandatory vapor  
2 mitigation measures. Water Code Section 13267 does not authorize the Regional Water Board to  
3 impose remedial obligations. To do so, the Regional Water Board would have to comport with the  
4 procedural and factual requirements of Water Code Section 13304. Thus, the Regional Water  
5 Board has exceeded its authority under the California Water Code by issuing the 13267 Letter.

6 **4.2.5 The EPA Guidelines Are Being Selectively Enforced, Which is**  
7 **Unfair.**

8 The EPA Guidelines selectively target only a few identified South Bay Superfund sites,  
9 including the Site which is the subject of this Petition. If the EPA Guidelines are intended to be  
10 treated as rules of general applicability, they should be issued by EPA as such, and should be  
11 enforced by the Regional Water Board and EPA at all similarly situated groundwater sites in the  
12 San Francisco Bay Area and throughout EPA Region IX's jurisdiction. To fail to do so imposes an  
13 undue burden not only on Petitioner, but also on the landowners and tenants at the affected sites  
14 who must suffer considerable costs, additional burdensome investigation and mitigation, and stigma  
15 to the commercial value of their properties.

16 **4.2.6 The EPA Guidelines Do Not Impose Legally Binding**  
17 **Requirements.**

18 As stated in the December 3, 2013 cover letter from EPA to the Regional Water Board, the  
19 EPA Guidelines for vapor intrusion evaluations are "recommendations." As such, they do not  
20 impose legally-binding requirements on any party, including EPA, the State of California or TI. For  
21 that reason, the Regional Water Board cannot use the authority of Water Code Section 13267 to  
22 impose them on Petitioner, at least not until EPA follows the required procedures under federal law.

23 **4.2.7 The EPA Guidelines Are Inappropriately Prescriptive.**  
24

25 The EPA Guidelines—which the Regional Water Board's 13267 Letter characterizes as  
26 "requirements" in its 13267 Letter—are overly prescriptive, including with respect to vapor  
27 mitigation measures. Under Water Code Section 13360, "[n]o . . . order of a regional board . . .  
28 shall specify the design, location, type of construction, or particular manner in which compliance"



1 with an order may be accomplished. Although the Regional Board may *suggest* methods for  
2 compliance, the recipient of the order must be allowed to comply in any lawful manner. Here, the  
3 Regional Water Board seeks to impose EPA's Guidelines which contain overly prescriptive specific  
4 mitigation measures. Indeed, the EPA Guidelines themselves, although styled as  
5 "recommendations" and "guidelines," frequently use mandatory language (*i.e.*, "should," "must,"  
6 and "shall"). The EPA Guidelines specify certain mitigation measures that are essentially  
7 mandatory (including building evacuations), and disfavor other methods such as conduit sealing and  
8 air purifiers. But, under Water Code Section 13360, Petitioner must be allowed to comply in any  
9 lawful manner.

10 \* \* \*

11 For all of these reasons, the Regional Water Board's requirements in the 13267 Letter are  
12 inappropriate and improper.

13 In the event this Petition is made active, Petitioner will submit as an amendment to this  
14 Petition a full and more complete statement of points and authorities in support of the legal issues  
15 raised in this Petition.

16 **5. Burden on Petitioner**

17 TI is aggrieved by the Regional Board's improper 13267 Letter because it is unsupported by  
18 adequate technical or scientific data, fails to consider work already performed by TI, is inconsistent  
19 with procedural requirements of federal law, conflicts with requirements of the Water Code, and  
20 lacks sufficient legal basis. The 13267 Letter requires that TI prepare and conduct a vapor intrusion  
21 evaluation workplan which will be burdensome and costly, and could unnecessarily alarm tenants,  
22 occupants, and property owners. Because the 13267 Letter is improper, this constitutes an  
23 unreasonable expense and unnecessary measure. Further, imposing additional requirements at this  
24 time, while investigation and monitoring are continuing, risks mandating cleanup actions that are  
25 unnecessary and wasteful of resources.

26 **6. Request for Relief**

27 TI requests that the State Water Board review and either set aside the 13267 Letter or direct  
28 the Regional Water Board to set aside the Letter. As set forth above, however, TI will continue to

1 work with the Regional Water Board regarding the scope of work to be performed under the 13267  
2 Letter. For that reason, TI files this Petition to protect its right of appeal and requests that the State  
3 Water Board hold this Petition in abeyance while negotiations with the Regional Water Board  
4 continue, under the State Board's implementing regulations at Section 2050.5(d). Provided that TI  
5 and the Regional Water Board reach a resolution, consideration of this Petition may be unnecessary.

6 **7. Statement of Points and Authorities**

7 TI's initial statement of the basis for this appeal is set forth above. TI reserves the right to  
8 supplement this statement and file additional points and authorities at a future date upon receipt of  
9 the administrative record and as additional information and evidence is developed.

10 **8. Copy to Regional Water Board**

11 A copy of this Petition and its Exhibits are concurrently being sent to the Regional Water  
12 Board, as required by Section 2050(a)(8) of the State Water Board's implementing regulations. *See*  
13 23 Cal. Code Reg. § 2050(a)(8).

14 **9. Issues and Objections**

15 In the event this Petition is made active, TI will submit as an amendment to this Petition a  
16 statement that the substantive issues and objections raised in this Petition were either raised before  
17 the Regional Water Board or an explanation of why Petitioner was not required or was unable to  
18 raise the substantive issues and objections before the Regional Board. Petitioner met with  
19 representatives of EPA and the Regional Water Board on January 30, 2014 and again on March 25,  
20 2014, at which time all of these issues were raised.

21 **ADDITIONAL MATTERS**

22 **10. Administrative Record**

23 In the event this Petition is made active, TI will submit as an amendment to this Petition a  
24 copy of its request to the Regional Water Board for preparation of the administrative record  
25 concerning this matter.

26 **11. Request for Hearing**

27 In the event this Petition is made active, Petitioner will request that the State Water Board  
28 hold a hearing at which Petitioner can present additional evidence. Petitioner will submit as an

1 amendment to this Petition a statement regarding that additional evidence and a summary of  
2 contentions to be addressed or evidence to be introduced and a showing of why the contentions or  
3 evidence have not been previously or adequately presented, as required under Title 23, Section  
4 2050.6 of the California Code of Regulations.

5 **CONCLUSION**

6 For all the reasons stated above, Petitioner requests that the State Water Board set aside the  
7 Regional Water Board's May 13, 2014 13267 Letter or direct the Regional Water Board to set it  
8 aside.

9 Respectfully Submitted,

10 DATED: June 9, 2014

ARNOLD & PORTER LLP

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